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### (54) Method for converting sparingly water-soluble medical substance to amorphous state

(57) A method is provided for producing a solid dispersion of a sparingly water-soluble medical substance comprising the step of heat treating a mixture of the sparingly water-soluble medical substance, an amorphous state-inducing agent and an amorphous state-stabilising agent using a hot air dryer, a fluidized bed dryer, a gyro-dryer or a powder dryer at a temperature of not more than the melting point of the sparingly water-soluble medical substance for 20-120 minutes whereby the sparingly water-soluble medical substance is converted to the amorphous state.

Also provided is a method for producing a solid dispersion of a sparingly water-soluble medical substance comprising the step of microwave heating a mixture of

the sparingly water-soluble medical substance, an amorphous state-stabilising agent and an amorphous state-inducing agent at a frequency of 915, 2450, 5800 or 22125 MHz for 3-40 minutes whereby the medical substance is converted to the amorphous state.

These processes make it possible to make sparingly water-soluble medical substance amorphous at a temperature lower than those employed in the conventional methods. The solid dispersions of the amorphous sparingly water-soluble medical substances thus obtained have an improved mucosal or rectal absorption rate, which makes it possible to elevate their bioavailability.



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Application Number  
EP 03 01 6608

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